1999
NORTON SOUND DISTRICT
SALMON REPORT
to the
Alaska Board of Fisheries

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Introduction

The Norton Sound Salmon District consists of all waters between Cape Douglas in the north and Point Romanof Light in the south. The District is divided into six subdistricts: Subdistrict 1, Nome; Subdistrict 2, Golovin; Subdistrict 3, Moses Point; Subdistrict 4, Norton Bay; Subdistrict 5, Shaktoolik; and Subdistrict 6, Unalakleet Subdistrict. Each of these subdistricts contains at least one major salmon-producing stream. Subdistrict boundaries were established to facilitate management of individual salmon stocks.

All commercial salmon fishing in the district is by set gillnets in marine waters; fishing effort is usually concentrated near river mouths. Commercial fishing typically begins in June and targets chinook salmon. Emphasis switches to chum salmon around June 25 and the coho salmon fishery begins the third week of July. The season closes September 7. Pink salmon may be very abundant during even year returns. A pink salmon directed fishery employing gillnet mesh size restrictions which increase pink salmon harvest while minimizing chum salmon catchability may replace or may be scheduled to alternate with periods of the historical chum salmon directed fishery.

Salmon management has changed significantly during recent years due to limited market conditions and marginal returns of many salmon stocks within the district. The Eastern subdistricts, Norton Bay, Shaktoolik, and Unalakleet all have fairly healthy salmon stocks. Commercial fishing in these subdistricts is managed using commercial fishing statistics and the Unalakleet River test fishing escapement index. Both the Golovin and Moses Point Subdistricts have recently experienced poor chum salmon returns. In these two subdistricts, management first ensures an adequate escapement, then a subsistence harvest within historical levels and finally an attempt is made to provide for a commercial and sport harvest. The Nome Subdistrict is managed intensively for subsistence use. Registration permits, closed waters, setting fishing period length, limiting gear and harvest limits are all tools that can be employed throughout the season to provide for escapement needs and to maximize subsistence opportunity.

Commercial Fishery Overview

The 1999 Norton Sound commercial salmon season can be described as the poorest season on record. The fishing season began two weeks later than usual on July 2 due to a late spring breakup and ended 3 days before the regulatory closure on September 4 as a result of poor returns. Commercial fishing time and areas were set throughout the season by Emergency Order. Both the combined commercial harvest of all salmon species and fishing effort were the lowest on record. As a result, the 1999 fishery value to the fisherman of $76,860 was the lowest value since 1968. This summary should be considered preliminary and will be updated with additions and corrections in subsequent reports.

Table 1 lists the Norton Sound salmon historical and current year commercial harvests relative to the recent 5 year (1994-1998) and the recent 10 year (1989-1998) averages. The total salmon harvest was very poor for all salmon species. The 1999 chinook salmon harvest of 2,508 was the lowest since 1976 at 68% below the recent 5 year average and 66% below the recent 10 year average. The coho salmon harvest of 12,662 was the lowest since 1978 at 77% below the recent 5 year average and 79% below the recent 10 year average catches. Commercial markets for pink salmon are sporadic in Norton Sound, but have recently generated interest for the strong even year returns. The 1999 pink salmon return was weak as expected allowing no commercial harvest. The chum salmon commercial harvest of 7,881 was also the lowest on record at 68% below the 5 year average and 83% below the 10 year average. These low harvests for all species totaling only 23,051 fish can be attributed almost exclusively to the low salmon returns throughout Norton Sound. A commercial market was available, but harvestable surpluses of salmon were very low which dictated restrictive fisheries management.

Only one primary salmon buyer operated in Norton Sound during the 1999 season. The newly built Unalakleet fish plant operated by Norton Sound Seafood Products was the base of commercial fisheries operations. Salmon were both delivered to the Unalakleet dock and tendered from the neighboring Shaktoolik Subdistrict. At Unalakleet, salmon were headed and gutted, iced, and then most were transported fresh to markets in Anchorage via airfreight. Some salmon were held in freezers for later sales.

The average price paid for Chinook salmon was $.82 per pound, $.35/lb for coho, and $.11/lb for chum salmon (Table 3). The total value of the raw fish reported on fish tickets in 1999 was $76,860. This was 83% below the recent 5-year average and 82% below the recent 10-year average (Appendix Table 1). The recent decline in traditional salmon markets has been offset to some extent in Norton Sound with the development of a pink salmon market on even year returns. However, no harvest of pink salmon combined with exceptionally low harvests of other species was the cause of this unusually low fishery value for 1999.

Subsistence Fishery

Household subsistence surveys will be partially funded by the Commercial Fisheries Division and implemented by the Division of Subsistence during the fall of 1999 in Norton Sound villages. This information will be available in later reports. Daily interviews of Unalakleet River and ocean subsistence fishermen were conducted at Unalakleet during the early portion of the fishing season in order to monitor the chinook salmon return. Total harvests by subsistence fishermen were not documented. However, verbal catch and effort information was used in combination with the Department's test net in the lower Unalakleet River and commercial catch results to evaluate the timing and magnitude of the chinook salmon return. This information was the basis for scheduling early commercial salmon fishing periods in the Unalakleet and Shaktoolik Subdistricts. Commercial fishing is typically only allowed after chinook salmon have been observed entering the Unalakleet River in increasing numbers for a week's time. This assures the harvest is directed on an actively migrating stock rather than milling fish. It assures

adequate quantities are available to subsistence users. And it also helps to minimize the intercept of salmon bound for the Yukon River.

Subsistence fishing permits are required by regulation for each household that fishes in the Nome Subdistrict. These permits identify the body of water to be fished, the type of gear used, and the bag limit, which is specific to that body of water. In addition, the permit contains a catch calendar where the permit holder records catches in numbers of each species of fish for each day fished. If the subsistence fishers have filled their harvest limits or would like to fish another location, they can be issued another permit for another area after the earlier one has been returned. These permits are important to management because they identify users and harvest limits. The actual catch information can not be compiled until well after the season when the permits are returned to the Department of Fish and Game; therefore, this information will also be presented in a later report.

The Nome Subdistrict was designated as a Tier II salmon management area during a special meeting by the Alaska Board of Fisheries held in Nome during March of 1999. Through a series of Board of Fisheries directed meetings, the Board concluded that the previous management plan did not provide adequate opportunity for all subsistence salmon users to supply their annual needs for chum salmon. As a result, the board allocated a subsistence priority to twenty individuals who applied and qualified for Tier II permits based on fishing history, dependence, and the projected harvestable surplus. The intent was to allow 20 permit holder's first priority over other subsistence users should only a small harvestable surplus of chum salmon return. If the run was assessed to be strong, then the subsistence fishery would open to all Alaskan residents of who obtain a registration permit and restrict individual harvests to prescribed bag limits. In addition, the Board established "Closed Waters" areas that would protect chum salmon on the spawning grounds where no subsistence salmon fishing would be allowed at any time.

SEASON SUMMARY BY SUBDISTRICT

Nome - Subdistrict 1

The commercial salmon season in the Nome Subdistrict is scheduled to take place by regulation between July 1 and August 31. However, a commercial salmon harvest could not be allowed due to inadequate harvestable surpluses of chum, pink, and coho salmon (Table 2). Commercial fishing in the subdistrict is typically very limited because the local salmon stocks are not abundant and the subsistence demand is high. Sport fishing for chum salmon is closed by regulation in the subdistrict. The recent ten year average commercial harvest is 1 sockeye, 197 coho, 32 pink, and 170 chum salmon (Appendix Table 2). The ten year average subsistence salmon harvest in the subdistrict is 48 chinook, 152 sockeye, 1,160 coho, 2,950 pink, and 3,212 chum salmon. During the 1999 season, eighty-four Tier I subsistence fishing permits were issued in addition to 20 Tier II permits. Some individuals were issued both types and multiple permits for different fishing locations. Harvest results for the 1999 subsistence fishing season will be available in a future report.

Subsistence fishing was closed by Emergency Order prior to the beginning of the chum salmon return to all Tier I fishermen with Tier II fishing only allowed in marine waters East of Cape Nome. The Board of Fish intended to allow more fishing time to Tier II permit holders early in the season when weather conditions are typically more suitable for processing salmon using traditional methods. The Board's intent was to limit the number of fishermen, thereby reducing the risk of overharvest early in the run before it could be fully assessed. The chum salmon run was first thought to be late, but determined to be well below average. On July 20, the subdistrict was closed by Emergency Order to all subsistence fishing through August 2 to protect the chum salmon stocks of the Nome Subdistrict.

The subdistrict reopened to all Tier I and Tier II fishermen on August 3 to target coho salmon. The coho salmon return was also initially believed to be late, but later assessed well below average. On August 16, the Nome Subdistrict was again closed to all subsistence fishing through September 7 by Emergency Order. The subdistrict reopened only when it was felt that continued restrictions would do little to place more coho salmon on the spawning grounds late in the season while lifting the restrictions would allow harvest opportunity of other species such as Dolly Varden and whitefish.

Golovnin Bay- Subdistrict 2

Over the past ten years, chum salmon stocks in the Golovnin Bay Subdistrict have received little or no commercial exploitation, yet in four of the past ten years spawning escapement goals have not been met. The 1999 Salmon Management Plan stated that the Golovnin Bay Subdistrict commercial harvest would be limited to a maximum of 15,000 chum salmon before mid-July in an attempt to protect chum salmon stocks and allow for some harvest while flesh quality is at its best. By that date, the chum salmon run would be assessed and fishing time could be adjusted accordingly.

No commercial chum or coho salmon periods were opened during the 1999 season due to the weak returns. In addition, the coho salmon sport fish bag limit was reduced from three fish per day down to one and eventually the season was closed. The entire Golovnin Bay Subdistrict was later closed to all subsistence fishing by Emergency Order from August 27 through September 16 in order to protect the remaining coho salmon return. This was the second time on record that the Golovnin Bay Subdistrict was closed to subsistence fishing.

The recent 5 year average harvest in the Golovnin Bay Subdistrict is 4 chinook, 1,157 coho, 22,215 pink, and 2,165 chum salmon (Appendix Table 3). The recent 10 year average harvest is 13 chinook, 4 sockeye, 787 coho, 11,596 pink, and 4,546 chum salmon. There was no commercial harvest allowed in 1999. The only other years when no commercial harvests occurred on record in this subdistrict were in 1965 and 1989.

Moses Point - Subdistrict 3

The Moses Point Subdistrict has also been experiencing below average chum salmon returns despite conservative management actions taken over the last ten years. However, the situation had improved slightly as indicated by the Kwiniuk River tower counts which have been at or above the escapement goal in the last five years. As a result, the river has been removed from the "Rivers of Concern" list established by the Department. The 1999 Salmon Management Plan directed that there would not be a chum salmon directed fishery in order to protect the recovering stock. Fishing periods could be scheduled for other salmon species utilizing special restrictions to minimize the incidental chum salmon harvest. It was expected that fishing directed at other salmon species would not significantly affect the subdistrict's chum salmon escapement.

As the season progressed, it became apparent that all salmon species returning to the subdistrict were well below average and therefore, no commercial fishing was allowed in the Moses Point Subdistrict for 1999. For comparison, the recent 5-year average harvests are 191 chinook, 9 sockeye, 2,775 coho, 43,448 pink, and 1,316 chum salmon (Appendix Table 4). The recent 10 year averages are 138 chinook, 4 sockeye, 2,147 coho, 21,774 pink, and 1,145 chum salmon. The only other years when no commercial harvests occurred on record in this subdistrict were in 1965 and 1967.

Norton Bay - Subdistrict 4

The Norton Bay Subdistrict typically has difficulty attracting a buyer due to its remoteness and its reputation for watermarked fish. Consequently, regulatory changes were implemented that moved the western boundary from Six Mile Point to Isaac's Point in 1995 and the eastern boundary out to Point Dexter in 1998 in an attempt to improve fish quality. Due to lack of timely salmon escapement information, the Norton Bay Subdistrict is typically managed in concert with Shaktoolik and Unalakleet Subdistricts because they reflect similar trends in salmon return strength and timing. In 1999, no commercial salmon fishing was allowed due to marginal salmon returns. There has actually only been three seasons in the last eleven years when salmon have been commercially harvested in the subdistrict (Appendix Table 5).

Shaktoolik and Unalakleet - Subdistricts 5 and 6

Both the Shaktoolik and Unalakleet Subdistricts, which share a common boundary, consistently attract commercial markets due to larger volumes of fish and better transportation services. Management actions typically encompass both subdistricts because salmon tend to intermingle and the harvest in one subdistrict affects the movement of fish to the adjacent subdistrict. As stated earlier, the department's test net in the Unalakleet River and subsistence interviews at Unalakleet are used to set early fishing periods in both subdistricts. As the season progresses, the test net, commercial catch indices, and the North River counting tower which is operated in cooperation with Kawarak Corporation, are used to assess return strengths of each salmon

species. Aerial surveys are frequently not obtained in either subdistrict due to poor survey conditions and are only useful for late season escapement assessment because of the long travel time between the fishery and the spawning grounds (Table 4).

Commercial fishing is typically only allowed after chinook salmon have been observed entering the Unalakleet River in increasing numbers for seven day's time to assure the harvest is directed on actively migrating stock and not on milling fish. In 1999, the run timing was late with the first fishing periods for Chinook salmon in both subdistricts not starting until July 2 for 24 hours to test the salmon abundance (Table 8 and 9). The commercial catches were low and the Department's test net index indicated the run was late or possibly weak. Three additional periods were announced with reduced fishing time. Catch per unit of effort data from each opening was used as a test of run strength. The Chinook salmon return was poor and commercial fishing was redirected to chum salmon on July 15 in both subdistricts utilizing mesh size restrictions. The purpose of that period was to also test the abundance of chum salmon, which yielded poor results. Again, it was apparent from escapement indicators that the chum salmon return was too weak to support further commercial harvest. Therefore, no additional chum salmon directed commercial periods were scheduled.

On July 29, both subdistricts opened to a reduced length coho salmon test period. The run timing was lagging, but there were conflicting reports of very successful sport catches in the Unalakleet River. A series of fishing periods were announced, each one separately, with reduced fishing time. Fishing effort and catches were low. The return was assessed to be below average with escapement marginal. As a result, both commercial fishing time and sport fish bag limits were reduced. The commercial season ended early with a final 48 hour period.

The 1999 commercial catches in the Shaktoolik Subdistrict included 581 chinook, 2,398 coho, and 2,181 chum salmon harvested by 15 permit holders (Table 2 and 8). The chinook salmon harvest was 57% below the recent 5 year average and 63% below the recent 10 year average (Appendix Table 6). The coho salmon harvest was 78% below the recent 5 year average and 77% below the recent 10 year average. The total chum salmon harvest in the Shaktoolik Subdistrict was 70% below the recent 5 year average and 86% below the recent 10 year average harvest.

The Unalakleet Subdistrict total commercial catch harvested by 45 permit holders included 1,927 chinook, 10,264 coho, and 5,700 chum salmon (Table 2 and 9). The chinook salmon catch was 69% below the recent 5-year average and 65% below the recent 10-year average (Appendix Table 7). The coho salmon harvest in the subdistrict was 75% below the recent 5-year average and 77% below the recent 10-year average. The total chum salmon was 58% below the recent 5-year average and 75% below the recent 10-year average.

ESCAPEMENT

Table 4 summarizes escapement assessments for the major index river systems of the Norton Sound and Port Clarence Districts. These descriptions are often qualitative assessments

described relative to historical returns. Some of the chum salmon assessments are described relative to more formalized biological escapement goals (BEG's) for index areas. These BEG's are not historic averages in all cases, but reflect a specific desired level of escapement. BEG's are usually an index of return strength based on peak aerial surveys or counting tower passage estimates.

Department escapement projects in the Norton Sound District include counting towers on the Kwiniuk and Niukluk Rivers, a test net operated on the Unalakleet River, and a weir on the Nome River. Both the Unalakleet test net and the Kwiniuk tower projects have been in operation for many years. They provide comparable and timely information that is used as a basis for inseason salmon management decisions. The Nome River weir was initiated as a counting tower project late in 1993 and was operational as a tower in 1994 and 1995 before switching to a functional weir in 1996. The Niukluk tower became operational in 1995. Both the Nome and Niukluk River projects have limited years of data that can be used when making comparisons, but have proven to be reliable and will become more valuable the longer they operate. The Shaktoolik River counting tower was not operated in 1999. Budget cuts required a downsizing of the Department's programs. Since the Shaktoolik tower had washed out three years in a row, it was decided to discontinue the project.

Four additional counting tower projects were also operated in the management area this season. The Snake, Eldorado, Pilgrim, and North River projects were setup and operated by Kawarak Corporation. These projects are cooperative ventures with the Department of Fish and Game who provided technical advice and purchased some equipment. These projects supplied important daily information to the Department that was very useful to the management of local salmon resources and will become more important the longer they run.

Aerial survey assessment conditions were fair to good in the northern subdistricts for most of the 1999 season, but poor to unacceptable in the eastern subdistricts. As usual, the Nome Subdistrict streams received the most intensive assessment efforts because salmon local stocks to the Nome area are strictly regulated, easily accessed by road system, and are exposed to intensive subsistence and sport fishing pressure.

Chinook Salmon

The Unalakleet and Shaktoolik Subdistricts are the primary Chinook salmon producers in Norton Sound. The Norton Bay, Moses Point and Golovnin Bay Subdistricts have also experienced a gradual increasing abundance of Chinook salmon returns during recent years. Overall, the 1999 Chinook salmon return was below average throughout the Norton Sound District. Eastern Norton Sound streams generally produce larger runs and therefore, support larger harvests. No aerial surveys of Chinook salmon were completed due to poor conditions. The Unalakleet test net, the Kwiniuk and Niukluk towers, commercial catch rates, and subsistence reports were the primary assessment tools for judging Chinook salmon run strength. All indicators suggested Chinook salmon escapements were one half to one third of average levels throughout Norton Sound.

Chum Salmon

Chum salmon escapements in 1999 were well below average throughout most of the management area. Survey conditions were good in the Nome Subdistrict where chum salmon escapements were estimated to be one quarter to one half the established escapement goals. The Nome River weir and counting towers on the Snake and Eldorado Rivers agree with the aerial suvey assessment of very low chum salmon escapements. No other aerial surveys in Norton Sound for chum salmon were obtained this season due to poor survey conditions. The Niukluk counting tower is used as an index for the Golovnin Bay Subdistrict. The estimated chum salmon passage during 1999 was one half the recent 5-year average. Likewise, the Kwiniuk tower in the Moses Point Subdistrict had a chum salmon count one half the escapement goal. The Shaktoolik Subdistrict had escapements well below average, while both the Ungalik and Unalakleet Rivers, to either side of the Shaktoolik, had near average escapements of chum salmon.

Coho Salmon

Coho salmon are found in nearly all of the chum salmon producing streams throughout Norton Sound with the primary commercial contributors being the Unalakleet and Shaktoolik Rivers. Because inclement weather is normally experienced in this area during August and September, escapement data can frequently be somewhat incomplete. Streams in the northern subdistricts of Norton Sound are typically surveyed. The Unalakleet River test net has the most complete data set to evaluate coho salmon escapement in the eastern subdistricts. The newer Nome area assessment projects are intended to monitor coho salmon as well as chum salmon and are becoming more important to fisheries management. The 1999 coho salmon return to the northern subdistricts had well below average escapements while eastern Norton Sound escapements were near average. Even though the Unalakleet test net suggested coho salmon escapements were below average, an early aerial survey of the North River, a tributary to the Unalakleet River, determined that coho salmon in the river were already at the low end of the desired BEG range. With the continued fisheries restrictions, it was felt that coho salmon escapements to the Unalakleet Subdistricts were adequate for 1999.

Pink Salmon

During recent years, pink salmon returns to Norton Sound have followed an odd/even year cycle with the even year returns typically much larger in size than the odd years. The 1999 low returns were very evident throughout Norton Sound, in many cases the lowest on record. It is normal for the run timing of weak returns to arrive later than strong returns. The combination of the 1999 season being delayed by approximately two weeks due to a late spring breakup and a weak run, resulted in pink salmon peaking nearly one month later than on even strong year returns.

Sockeye Salmon

Sockeye salmon are typically found in small numbers throughout Norton Sound with the exception of Glacial Lake where approximately 1,000 fish return to spawn each year. Port Clarence is the salmon district immediately to the northwest of Norton Sound and has a spawning population approaching 10,000 fish in recent years returning to Salmon Lake. No commercial fisheries targeted these stocks in many years due to their low abundance and importance to subsistence users. Aerial surveys in 1999 for Glacial Lake counted 425 fish, which is about 50% below average. Conversely, an aerial survey estimate of 31,700 sockeye salmon in Salmon Lake was well above expectations and approximately 3 times the recent average. Populations in other streams are so small that they are not usually counted and there could easily be a three-fold increase without notice.

MANAGEMENT CONCERNS

- Depressed Chum Salmon Abundance

Chum salmon stocks have been depressed throughout Norton Sound over the past ten to twelve years with escapements in the northern subdistricts continuing to be a major concern. Most chum salmon escapement goals were not met in 1999, even in many instances with drastic reductions in all forms of harvest. The Nome Subdistrict was closed again in 1999 during the entire chum salmon run to sport and commercial fishing. Subsistence fishery management now requires the full attention of a biologist who manages on a stream-by-stream basis and the implements a newly created Tier II fishery management plan. All streams and half the marine waters in the Nome Subdistrict were closed to directed chum salmon subsistence fishing for the majority of the 1999 season. The Golovin Bay and Moses Point Subdistricts fell well short of their escapement goals with no commercial harvest allowed. Eastern Norton Sound streams were thought to have had adequate chum salmon escapements, but only one reduced chum salmon commercial test opening was allowed for the entire season. The Eldorado and Kwiniuk Rivers were removed from the "Rivers of Concern" because they attained their chum salmon escapement goals in each of the last four years. However both streams continue to have depressed total returns which can support only small harvests. Even though escapement goals are generally being attained for most index streams in recent years, chum salmon harvests will continue to be managed conservatively to assure future returns.

- Chum Salmon Run Timing

The 1999 chum salmon return to the Nome Subdistrict was thought to be late from the beginning so people were optimistic that the run was simply delayed. However, it soon became apparent that the run was actually very poor. In this case, the subsistence strategy of harvesting a small amount of chum salmon early resulted in an over-harvest. Fishermen need to be aware that late runs typically result in poor runs. Therefore, it is important to manage the early portions of late runs conservatively to prevent overharvest and damage to future returns.

- Chum Salmon Stock Rehabilitation

Rehabilitation efforts on poor years such as 1999 need to be considered carefully. At what level is the run too small to sacrifice a portion in hopes of increasing returns artificially? The 1999 Nome area chum salmon egg takes were canceled because it was felt the return to the artificially produced stock would exceed the wild stock return. This would be contrary to the genetic policy.

- Declining Salmon Markets

Salmon marketing conditions have become significant factors for consideration when scheduling fishing periods. Market conditions have caused more restrictive limitations than biological factors in recent years for many species. Fish buyers frequently notify the Department of Fish and Game that they can only handle a limited quantity of fish with a high quality standard and at a specific rate to optimize their operations. The fishery manager must not only monitor the salmon returns and harvest rates, but must also coordinate schedules with the salmon buyers to protect the limited markets available for Norton Sound salmon. There are some people who feel that as western Alaska fisheries dwindle, the markets will relocate elsewhere. When or if the stocks rebound, it is feared there will be little market interest in salmon from western Alaska, since the markets have become established where stocks are more consistent and have fewer logistic expenses.

- Increasing Sport Fishery Participation

As a result of reduced subsistence opportunities, overcrowding of other areas, and the increased capabilities of individuals, sport fishing is gaining popularity. Sport fish bag limits are being reviewed, but potential harvest and effort is becoming an important consideration when planning commercial fishing schedules. Commercial and subsistence management actions must be coordinated with the local sport fisheries.

2000 OUTLOOK

Salmon outlooks and harvest projections for the 2000 commercial salmon season are based on qualitative assessments of brood year returns, subjective determinations of freshwater over-wintering and ocean survival, and projections of local market conditions. Salmon buyers will probably operate in only some of the Norton Sound subdistricts during 2000. The chinook return may be well below average with a commercial harvest ranging from 2,000 to 4,000 fish. A pink salmon market is likely to be available in 2000. The pink salmon harvests during even years are more than sufficient to provide for the recent harvest goal of 500,000 pink salmon. The 2000 chum salmon return is expected to be below average, while the market for Norton Sound chum will likely be minimal. The commercial harvest of chum salmon will be managed conservatively to provide a potential harvest between 20,000 and 30,000. The 1996 coho salmon return is the parent year for the 2000 return. The 1996 coho salmon commercial harvest and escapements suggest that the 2000 coho return may be above average and the commercial harvest could range from 50,000 to 80,000 fish.

Table 1. Commercial salmon catches by species, Norton Sound District, 1961-1999.

Year	Chinook	Sockeye	Coho	Pink	Chum	Total
1961	5,300	35	13,807	34,327	48,332	101,801
1962	7,286	18	9,156	33,187	182,784	232,431
1963	6,613	71	16,765	55,625	154,789	233,863
1964	2,018	126	98	13,567	148,862	164,671
1965	1,449	30	2,030	220	36,795	40,524
1966	1,553	14	5,755	12,778	80,245	100,345
1967	1,804	-	2,379	28,879	41,756	74,818
1968	1,045	-	6,885	71,179	45,300	124,409
1969	2,392	-	6,836	86,949	82,795	178,972
1970	1,853	-	4,423	64,908	107,034	178,218
1971	2,593	-	3,127	4,895	131,362	141,977
1972	2,938	-	454	45,182	100,920	149,494
1973	1,918	-	9,282	46,499	119,098	176,797
1974	2,951	-	2,092	148,519	162,267	315,829
1975	2,393	2	4,593	32,388	212,485	251,861
1976	2,243	11	6,934	87,916	95,956	193,060
1977	4,500	5	3,690	48,675	200,455	257,325
1978	9,819	12	7,335	325,503	189,279	531,948
1979	10,706	57	31,438	167,411	140,789	350,401
1980	6,311	40	29,842	227,352	180,792	444,337
1981	7,929	56	31,562	232,479	169,708	441,734
1982	5,892	10	91,690	230,281	183,335	511,208
1983	10,308	27	49,735	76,913	319,437	456,420
1984	8,455	6	67,875	119,381	146,442	342,159
1985	19,491	166	21,968	3,647	134,928	180,200
1986	6,395	233	35,600	41,260	146,912	230,400
1987	7,080	207	24,279	2,260	102,457	136,283
1988	4,096	1,252	37,214	74,604	107,966	225,132
1989	5,707	265	44,091	123	42,625	92,811
1990	8,895	434	56,712	501	65,123	131,665
1991	6,068	203	63,647	0	86,871	156,789
1992	4,541	296	105,418	6,284	83,394	199,933
1993	8,972	279	43,283	157,574	53,562	263,670
1994	5,285	80	102,140	982,389	18,290	1,108,184
1995	8,860	128	47,862	81,644	42,898	181,392
1996	4,984	1	68,206	487,441	10,609	571,241
1997	12,573	161	32,284	20	34,103	79,141
1998	7,429	7	29,623	588,013	16,324	641,396
1999	2,508	0	12,662	0	7,881	23,051
Previous 5-Yr Avg [a]	7,826	75	56,023	427,901	24,445	516,271
Previous 10-Yr Avg [b]	7,331	185	59,327	230,399	45,380	342,622

[a] 1994-1998
[b] 1989-1998

Table 2. Norton Sound commercial salmon harvest summary by subdistrict, 1999.

		Subdistricts						Total
		1	2	3	4	5	6	Number
Number of Fishermen		0	0	0	0	15	45	60
Chinook	Number	0	0	0	0	581	1,927	2,508
	Weight(lbs.)	0	0	0	0	12,395	36,026	48,421
Sockeye	Number	0	0	0	0	0	0	0
	Weight(lbs.)	0	0	0	0	0	0	0
Coho	Number	0	0	0	0	2,398	10,264	12,662
	Weight(lbs.)	0	0	0	0	16,683	71,354	88,037
Pink	Number	0	0	0	0	0	0	0
	Weight(lbs.)	0	0	0	0	0	0	0
Chum	Number	0	0	0	0	2,181	5,700	7,881
	Weight(lbs.)	0	0	0	0	16,904	40,752	57,656
Totals	Number	0	0	0	0	5,160	17,891	23,051
	Weight(lbs.)	0	0	0	0	45,982	148,132	194,114

Table 3. Norton Sound salmon dollar value and average price paid to the fisherman, by species, 1999.

Species	Dollar value	Average price per pound
Chinook	$39,705	$0.82
Sockeye		
Coho	$30,813	$0.35
Pink		
Chum	$6,342	$0.11
Total Value	$76,860	

Table 4. Salmon survey counts of Norton Sound streams and associated chum salmon escapement goals, 1999.

Stream Name	Chinook	Coho	Sockeye	Pink	Chum	Chum BEG Range
Salmon L.			31,720			
Grand Central R.			1,780			
Pilgrim R.	11	754	308		487	
Glacial L.			425			
Sinuk R.		217	550	180	1,697	3,600 - 7,200
Cripple R.		101		275	200	
Penny R.		105		10	15	
Snake R.		260		200	400	800 - 1,600
Nome R.		620		345	375	1,600 - 3,200
Flambeau R.					55	Combined
Eldorado R.		45		6	1,741	5,200 - 10,400
Bonanza R.				245	361	1,000 - 1,900
Solomon R.		62		90	51	300 - 550
Fish R.[a]		821		20	50	Combined
Boston Cr.[a]		319				23,200 - 46,400
Niukluk R.[a]		619			640	
Ophir Cr.[a]		61				
Kwiniuk R.	114 [c]	223		466 [c]	8,342 [c]	15,600 - 31,200
Tubutulik R.[b]						13,600 - 27,200
Inglutalik R.[b]						
Ungalik R.[a]		703		4,100	2,260	
Shaktoolik R.[a]		710		820	1,640	
Unalakeet R.[a]	3	78				Combined
Old Woman R.[a]		37			5	2,400 - 4,800
North R.	18	533 [e]		3,790	1,480	

Note: A multitude of factors affect escapement estimates. The numbers above are strict values that are instantaneous counts which alone do not truely represent the strength of the return. Chum gaols pertain to aerial surveys in all cases except for Kwiniuk River which has counting tower goal. Refer to text for an evaluation of the return.

[a] Counts should be considered minimums due to counting conditions.

[b] No surveys due to counting conditions.

[c] Preliminay expanded tower counts.

[d] Chum goal for tower count.

[e] Coho BEG Range on the North River is 550 to 1,100.

Table 5. Commercial salmon set gillnet catches from Shaktoolik, Subdistrict 5, Norton Sound, 1999.

				Period Catch and Catch Per Unit Effort								Cumulative Catch and Catch Per Unit Effort							
Period	Hrs. Fished	Date	# FM	Kings	King CPUE	Chum	Chum CPUE	Pinks	Pink CPUE	Coho	Coho CPUE	Kings	King CPUE	Chum	Chum CPUE	Pinks	Pink CPUE	Coho	Coho CPUE
1	24	7/2-7/3	5	70	0.58	24	0.20					70	0.58	24	0.20				
2	24	7/5-7/6	11	128	0.48	41	0.16					198	0.52	65	0.17				
3	24	7/8-7/9	11	265	1.00	353	1.34					463	0.71	418	0.65				
4	24	7/12-7/13	8	94	0.49	58	0.30					557	0.66	476	0.57				
5	24	7/15-7/16	6	24	0.17	1,187	8.24					581	0.59	1,663	1.69				
6	24	7/29-7/30	0									581		1,663	1.69				
7	24	8/2-8/3	9			150	0.69			219	1.01	581		1,813	1.51			219	1.01
8	24	8/5-8/6	8			111	0.58			568	2.96	581		1,924	1.38			787	1.93
9	24	8/9-8/10	8			158	0.82			341	1.78	581		2,082	1.31			1,128	1.88
10	24	8/12-8/13	8			9	0.05			146	0.76	581		2,091	1.18			1,274	1.61
11	24	8/16-8/17	11			49	0.19			660	2.50	581		2,140	1.05			1,934	1.83
12	24	8/19-8/20	5			29	0.24			177	1.48	581		2,169	1.00			2,111	1.80
13	24	8/26-8/27	7			7	0.04			168	1.00	581		2,176	0.93			2,279	1.70
14	24	8/30-8/31	3			3	0.04			75	1.04	581		2,179	0.91			2,354	1.66
15	48	9/2-9/4	2			2	0.02			44	0.46	581		2,181	0.87			2,398	1.59

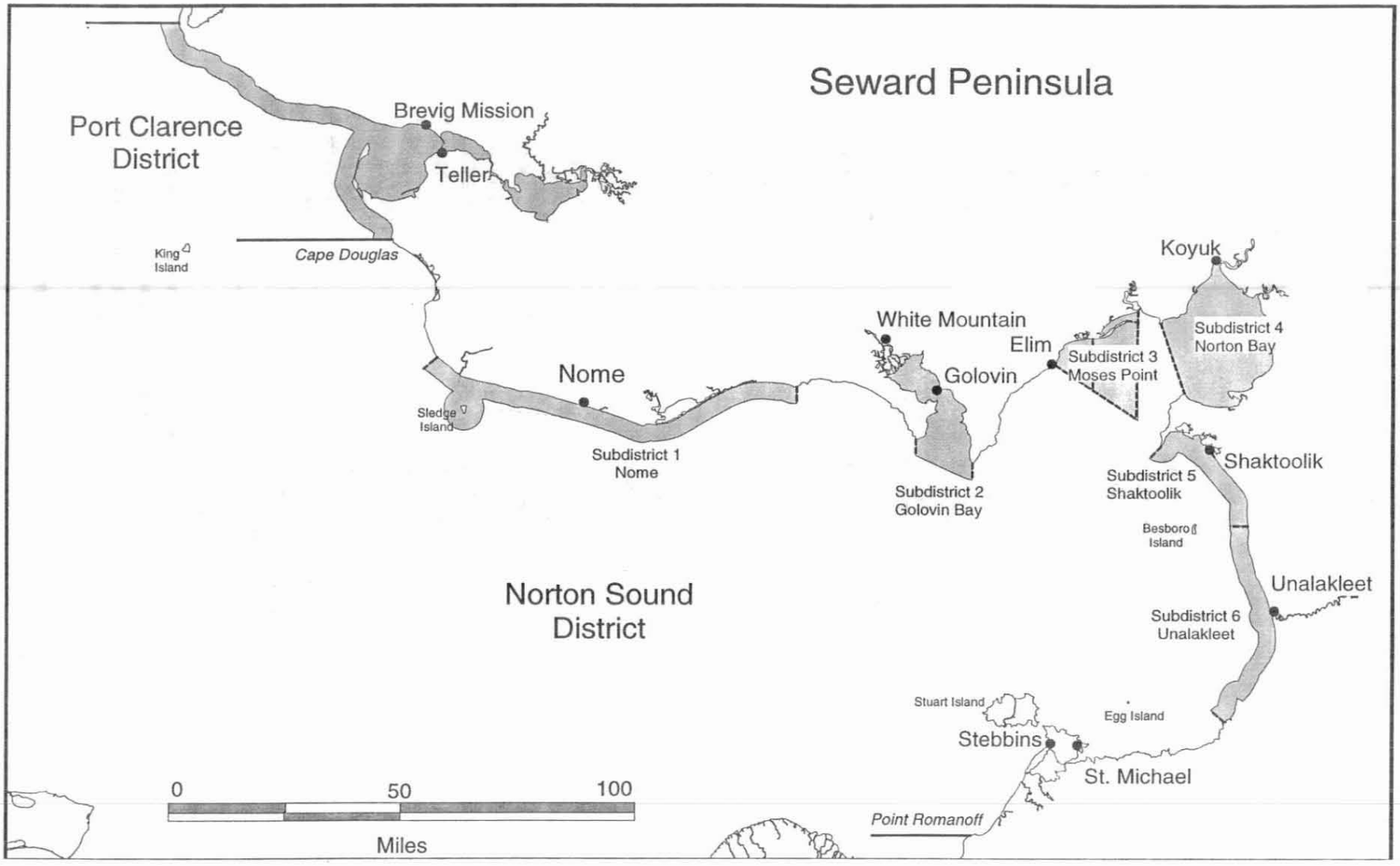
Total hours fished = 384
Total number of permits fished = 15

Table 6. Commercial salmon set gillnet catches from Unalakleet, Subdistrict6, Norton Sound, 1999.

				Period Catch and Catch Per Unit Effort								Cumulative Catch and Catch Per Unit Effort							
Period	Hrs. Fished	Date	# FM	Kings	King CPUE	Chum	Chum CPUE	Pinks	Pink CPUE	Coho	Coho CPUE	Kings	King CPUE	Chum	Chum CPUE	Pinks	Pink CPUE	Coho	Coho CPUE
1	24	7/2-7/3	38	1,039	1.14	786	0.86					1,039	1.14	786	0.86			0	
2	24	7/5-7/6	16	235	0.61	579	1.51					1,274	0.98	1,365	1.05			0	
3	24	7/8-7/9	26	523	0.84	1,109	1.78					1,797	0.94	2,474	1.29			0	
4	24	7/12-7/13	20	80	0.17	757	1.58					1,877	0.78	3,231	1.35			0	
5	24	7/15-7/16	12	42	0.15	1,300	4.51					1,919	0.71	4,531	1.69			0	
6	24	7/29-7/30	2	0	0.00	61	1.27			12	0.25	1,919	0.70	4,592	1.68			12	0.25
7	24	8/2-8/3	14	0	0.00	236	0.70			281	0.84	1,919	0.62	4,828	1.57			293	0.76
8	24	8/5-8/6	12	3	0.01	122	0.42			633	2.20	1,922	0.57	4,950	1.47			926	1.38
9	24	8/9-8/10	18	1	0.00	214	0.50			1,303	3.02	1,923	0.82	5,164	1.36			2,229	2.02
10	24	8/12-8/13	14	0	0.00	59	0.18			910	2.71	1,923	0.72	5,223	1.27			3,139	2.18
11	24	8/16-8/17	21	0	0.00	154	0.31			2,397	4.76	1,923	0.60	5,377	1.16			5,536	2.85
12	24	8/19-8/20	19	2	0.00	92	0.20			846	1.86	1,925	0.53	5,469	1.07			6,382	2.66
13	24	8/26-8/27	15	1	0.00	124	0.34			1,319	3.66	1,926	0.48	5,593	1.03			7,701	2.79
14	24	8/30-8/31	15	1	0.00	31	0.09			372	1.03	1,927	0.44	5,624	0.97			8,073	2.59
15	48	9/2-9/4	16			76	0.10			2,191	2.85	1,927	0.38	5,700	0.87			10,264	2.64

Total hours fished = 384
Total number of permits fished = 45

Figure 1. Norton Sound commercial salmon fishing districts and subdistricts.



Appendix Table 1. Dollar estimates of Norton Sound District commercial salmon fishery, 1961 - 1999.

Year	Gross Value of Catch to Fishermen	Wages Earned [b]	License and Tax Revenues to State (License Fees Only)
1961	[a]	[a]	$2,010.00
1962	$105,800.00	[a]	$16,341.00
1963	$104,000.00	[a]	$18,009.00
1964	$51,000.00	[a]	$11,305.00
1965	$21,483.00	[a]	$5,084.00
1966	$68,000.00	[a]	$4,680.00
1967	$44,038.00	$58,000.00	$3,500.00
1968	$63,700.00	[a]	$4,000.00
1969	$95,297.00	$72,145.00	[a]
1970	$99,019.00	$55,100.00	$5,595.00
1971	$101,000.00	$65,500.00	$5,730.00
1972	$102,225.00	$68,700.00	$7,000.00
1973	$308,740.00	$81,000.00	$15,400.00
1974	$437,127.00	$129,600.00	$20,028.00
1975	$413,255.00	$172,800.00	$28,230.00
1976	$285,283.00	[a]	$10,133.00
1977	$528,610.00	[a]	$11,386.00
1978	$814,221.00	[a]	$12,002.00
1979	$876,547.00	[a]	$11,780.00
1980	$583,388.00	[a]	$11,640.00 [c]
1981	$758,471.00	[a]	$11,940.00
1982	$988,588.00	[a]	$7,155.00 [c d]
1983	$1,038,967.00	[a]	$10,700.00 [c]
1984	$721,055.00	[a]	$9,690.00 [c]
1985	$822,056.00	[a]	$5,820.00 [e]
1986	$539,576.00	[a]	$5,970.00 [e]
1987	$504,631.00	[a]	$5,940.00 [e]
1988	$754,751.00	[a]	$10,050.00 [e f]
1989	$274,817.00	[a]	$10,300.00 [e]
1990	$497,623.00	[a]	$10,350.00 [e]
1991	$425,430.00	[a]	$10,250.00 [e]
1992	$448,395.00	[a]	$10,200.00 [e]
1993	$322,117.00	[a]	$8,835.00 [e]
1994	$864,882.00	[a]	$10,000.00 [e]
1995	$356,912.00	[a]	$5,250.00 [e]
1996	$340,347.00	[a]	$4,300.00 [e]
1997	$363,907.48	[a]	$5,100.00 [e]
1998	$358,982.00	[a]	$4,100.00 [e]
1999	$76,860.00	[a]	[a]

[a] Information not available.

[b] Includes wages paid to tender boat operators, processing plant employ

[c] Includes only permit renewals and vessel license fees.

[d] The Alaska state legislature lowered all resident permit renewal fees and vessel license fees to poverty level fees for 1982.

[e] Includes only permit renewal fees.

[f] The Alaska state legislature raised resident permit renewal fee to $50.0

Appendix Table 2. Commercial and subsistence salmon catches by species, by year in Nome Subdistrict, Norton Sound District, 1964-1999. [c]

NOME (SUBDISTRICT 1)

	Commercial						Subsistence						Combined					
Year	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total
1964	5	-	-	1	1,194	1,200	-	-	-	-	-	-	5	-	-	1	1,194	1,200
1965	1	-	-	193	1,941	2,135	-	-	-	780	1,825	2,605	1	-	-	973	3,766	4,740
1966	1	-	32	1	581	615	12	-	-	1,794	1,762	3,568	13	-	32	1,795	2,343	4,183
1967	-	-	-	72	406	478	11	-	-	349	627	987	11	-	-	421	1,033	1,465
1968	-	-	-	50	102	152	7	-	-	6,507	621	7,135	7	-	-	6,557	723	7,287
1969	-	-	63	330	601	994	2	-	-	3,649	508	4,159	2	-	63	3,979	1,109	5,153
1970	-	-	6	55	960	1,021	-	-	35	5,001	458	5,494	0	-	41	5,056	1,418	6,515
1971	11	-	-	14	2,315	2,340	-	-	122	5,457	2,900	8,479	11	-	122	5,471	5,215	10,819
1972	15	-	-	12	2,643	2,670	19	-	52	4,684	315	5,070	34	-	52	4,696	2,958	7,740
1973	-	-	-	321	1,132	1,453	14	-	120	5,108	1,863	7,105	14	-	120	5,429	2,995	8,558
1974	19	-	123	7,722	10,431	18,295	8	-	5	3,818	183	4,014	27	-	128	11,540	10,614	22,309
1975	2	-	319	2,163	8,364	10,848	2	-	97	6,267	2,858	9,224	4	-	416	8,430	11,222	20,072
1976	2	10	26	1,331	7,620	8,989	13	-	189	5,492	1,705	7,399	15	10	215	6,823	9,325	16,388
1977	8	-	58	65	15,998	16,129	35	-	498	2,773	12,192	15,498	43	-	556	2,838	28,190	31,627
1978	19	-	-	22,869	8,782	31,670	35	-	225	13,063	4,295	17,618	54	-	225	35,932	13,077	49,288
1979	9	-	29	5,860	5,391	11,289	11	-	1,120	6,353	3,273	10,757	20	-	1,149	12,213	8,664	22,046
1980	8	-	-	10,007	13,922	23,937	129	-	2,157	22,246	5,983	30,515	137	-	2,157	32,253	19,905	54,452
1981	4	-	508	3,202	18,666	22,380	35	14	1,726	5,584	8,579	15,938	39	14	2,234	8,786	27,245	38,318
1982	20	-	1,183	18,512	13,447	33,162	21	6	1,829	19,202	4,831	25,889	41	6	3,012	37,714	18,278	59,051
1983	23	-	261	308	11,691	12,283	74	53	1,911	8,086	7,091	17,215	97	53	2,172	8,394	18,782	29,498
1984	7	-	820	-	3,744	4,571	83	16	1,795	17,182	4,883	23,959	90	16	2,615	17,182	8,627	28,530
1985	21	-	356	-	6,219	6,596	56	114	1,054	2,117	5,667	9,008	77	114	1,410	2,117	11,886	15,604
1986	6	-	50	-	8,160	8,216	150	107	688	8,720	8,085	17,750	156	107	738	8,720	16,245	25,966
1987	3	-	577	-	5,646	6,226	200	107	1,100	1,251	8,394	11,052	203	107	1,677	1,251	14,040	17,278
1988	2	-	54	182	1,628	1,866	63	133	1,076	2,159	5,952	9,383	65	133	1,130	2,341	7,580	11,249
1989	2	0	0	123	492	617	24	131	469	924	3,399	4,947	26	131	469	1,047	3,891	5,564
1990	0	0	0	0	0	0	58	234	510	2,233	4,246	7,281	58	234	510	2,233	4,246	7,281
1991	0	0	0	0	0	0	83	166	1,279	194	3,715	5,437	83	166	1,279	194	3,715	5,437
1992	1	2	693	185	881	1,762	152	163	1,481	7,351	1,684	10,831	153	165	2,174	7,536	2,565	12,593
1993	0	2	611	0	132	745	52	80	2,070	873	1,766	4,841	52	82	2,681	873	1,898	5,586
1994	0	1	287	0	66	354	23	69	983	6,556	1,673	9,304	23	70	1,270	6,556	1,739	9,658
1995	0	1	369	0	122	492	36	211	1,897	486	5,344	7,974	36	212	2,266	486	5,466	8,466
1996	0	0	9	13	3	25	19	353	1,317	5,802	4,333	11,824	19	353	1,326	5,815	4,336	11,849
1997	0	0	0	0	0	0	19	99	534	287	4,996	5,936	19	99	534	287	4,996	5,936
1998	0	0	0	0	0	0	15	14	1,057	4,797	964	6,847	15	14	1,057	4,797	964	6,847
1999	0	0	0	0	0	0												
5-year avg. [a]	0	0	133	3	38	174	22	149	1,158	3,586	3,462	8,377	22	150	1,291	3,588	3,500	8,551
10-year avg. [b]	0	1	197	32	170	400	48	152	1,160	2,950	3,212	7,522	48	153	1,357	2,982	3,382	7,922

[a] 1994-1998

[b] 1989-1998

[c] Subsistence harvest are incomplete prior to 1979.

Appendix Table 3. Commercial and subsistence salmon catches by species, by year in Golovin Subdistrict, Norton Sound District, 1962-1999.

GOLOVIN BAY (SUBDISTRICT 2)

	Commercial						Subsistence						Combined					
Year	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total
1962	45	11	264	10,276	68,720	79,316	-	-	-	-	-	-	45	11	264	10,276	68,720	79,316
1963	40	40	-	19,677	49,850	69,607	-	-	118	5,702	9,319	15,139	40	40	118	25,379	59,169	84,746
1964	27	40	3	7,236	58,301	65,607	-	-	-	-	-	-	27	40	3	7,236	58,301	65,607
1965	-	-	-	-	-	-	2	-	49	1,523	3,847	5,421	2	-	49	1,523	3,847	5,421
1966	17	14	584	4,665	29,791	35,071	4	-	176	1,573	3,520	5,273	21	14	760	6,238	33,311	40,344
1967	10	-	747	5,790	31,193	37,740	3	-	185	2,774	4,803	7,765	13	-	932	8,564	35,996	45,505
1968	12	-	205	18,428	10,011	28,656	4	-	181	4,955	1,744	6,884	16	-	386	23,383	11,755	35,540
1969	28	-	1,224	23,208	20,949	45,409	2	-	190	2,760	2,514	5,466	30	-	1,414	25,968	23,463	50,875
1970	13	-	3	18,721	20,566	39,303	4	-	353	2,046	2,614	5,017	17	-	356	20,767	23,180	44,320
1971	37	-	197	2,735	33,824	36,793	7	-	191	1,544	1,936	3,678	44	-	388	4,279	35,760	40,471
1972	36	-	20	6,562	27,097	33,715	4	-	62	1,735	2,028	3,829	40	-	82	8,297	29,125	37,544
1973	70	-	183	14,145	41,689	56,087	1	-	48	9	74	132	71	-	231	14,154	41,763	56,219
1974	30	-	3	28,340	30,173	58,546	3	-	-	967	205	1,175	33	-	3	29,307	30,378	59,721
1975	17	-	206	10,770	41,761	52,754	-	-	1	2,011	2,025	4,037	17	-	207	12,781	43,786	56,791
1976	12	-	1,311	24,051	30,219	55,593	-	-	-	1,995	1,128	3,123	12	-	1,311	26,046	31,347	58,716
1977	26	-	426	7,928	53,912	62,292	3	-	80	703	2,915	3,701	29	-	506	8,631	56,827	65,993
1978	22	-	94	72,033	41,462	113,611	1	-	-	2,470	1,061	3,532	23	-	94	74,503	42,523	117,143
1979	75	49	1,606	45,948	30,201	77,879	-	-	845	2,546	2,840	6,231	75	49	2,451	48,494	33,041	84,110
1980	36	36	328	10,774	52,609	63,783	12	-	692	10,727	4,057	15,488	48	36	1,020	21,501	56,666	79,271
1981	23	5	13	49,755	58,323	108,119	8	-	1,520	5,158	5,543	12,229	31	5	1,533	54,913	63,866	120,348
1982	78	5	4,281	39,510	51,970	95,844	7	-	1,289	4,752	1,868	7,916	85	5	5,570	44,262	53,838	103,760
1983	52	10	295	17,414	48,283	66,054	-	-	-	-	-	- [c]	-	-	-	-	-	-
1984	31	-	2,462	88,588	54,153	145,234	-	-	-	-	-	- [c]	-	-	-	-	-	-
1985	193	113	1,196	3,019	55,781	60,302	12	2	430	1,904	9,577	11,925 [c]	205	115	1,626	4,923	65,358	72,227
1986	81	8	958	25,425	69,725	96,197	-	-	-	-	-	- [c]	-	-	-	-	-	-
1987	166	51	2,203	1,579	44,334	48,333	-	-	-	-	-	- [c]	-	-	-	-	-	-
1988	108	921	2,149	31,559	33,348	68,085	-	-	-	-	-	- [c]	-	-	-	-	-	-
1989	0	0	0	0	0	0	-	-	-	-	-	- [c]	-	-	-	-	-	-
															-	-	-	-
1990	52	21	0	0	15,993	16,066	-	-	-	-	-	- [c]	-	-	-	-	-	-
1991	49	1	0	0	14,839	14,889	-	-	-	-	-	- [c]	-	-	-	-	-	-
1992	6	9	2,085	0	1,002	3,102	-	-	-	-	-	- [c]	-	-	-	-	-	-
1993	1	4	2	8,480	2,803	11,290	-	-	-	-	-	- [c]	-	-	-	-	-	-
1994	0	0	3,424	0	111	3,535	253	168	733	8,410	1,337	10,901 [d]	253	168	4,157	8,410	1,448	14,436
1995	0	0	1,616	4,296	1,987	7,899	165	34	1,649	7,818	10,373	20,039 [d]	165	34	3,265	12,114	12,360	27,938
1996	0	0	638	0	0	638	86	134	3,014	17,399	2,867	23,500 [d]	86	134	3,652	17,399	2,867	24,138
1997	19	2	102	20	8,003	8,146	138	427	555	4,570	4,891	10,581 [d]	157	429	657	4,590	12,894	18,727
1998	1	0	3	106,761	723	107,488	184	37	1292	13340	1893	16747 [d]	185	37	1,295	120,101	2,616	124,235
1999	0	0	0	0	0	0												
5-year avg. [a]	4	0	1,157	22,215	2,165	25,541	165	160	1,449	10,307	4,272	16,354	169	160	2,605	32,523	6,437	41,895
10-year avg. [b]	13	4	787	11,956	4,546	17,305	-	-	-	-	-	-	-	-	-	-	-	-

[a] 1994-1998

[b] 1989-1998

[c] Subsistence survey not conducted.

[d] Harvest estimated from Div. of Subsistence survey.

Appendix Table 4. Commercial and subsistence salmon catches by species, by year in Moses Point Subdistrict, Norton Sound District, 1962-1999.

MOSES POINT (SUBDISTRICT 3)

	Commercial						Subsistence						Combined					
Year	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total
1962	27	-	-	11,100	50,683	61,810	-	-	-	-	-	-	27	-	-	11,100	50,683	61,810
1963	15	-	-	2,549	46,274	48,838	5	-	-	5,808	8,316	14,129	20	-	-	8,357	54,590	62,967
1964	32	3	-	3,372	28,568	31,975	-	-	-	63	348	411	32	3	0	3,435	28,916	32,386
1965	-	-	-	-	-	-	16	-	72	1,325	9,857	11,270	16	-	72	1,325	9,857	11,270
1966	17	-	-	2,745	24,741	27,503	14	-	250	2,511	5,409	8,184	31	0	250	5,256	30,150	35,687
1967	-	-	-	-	-	-	39	-	116	1,322	9,913	11,390	39	-	116	1,322	9,913	11,390
1968	12	-	1	9,012	17,908	26,933	2	-	80	6,135	2,527	8,744	14	-	81	15,147	20,435	35,677
1969	29	-	-	11,807	26,594	38,430	9	-	109	1,790	1,303	3,211	38	-	109	13,597	27,897	41,641
1970	39	-	-	13,052	29,726	42,817	16	-	160	4,661	6,960	11,797	55	-	160	17,713	36,686	54,614
1971	95	-	4	922	43,831	44,852	16	-	271	1,046	2,227	3,560	111	-	275	1,968	46,058	48,412
1972	190	-	11	5,866	30,919	36,986	44	-	108	1,579	2,070	3,801	234	-	119	7,445	32,989	40,787
1973	134	-	-	10,603	31,389	42,126	2	-	-		298	300	136	-	-	10,603	31,687	42,426
1974	198	-	9	12,821	55,276	68,304	3	-	-	2,382	1,723	4,108	201	-	9	15,203	56,999	72,412
1975	16	-	-	4,407	46,699	51,122	2	-	6	1,280	508	1,796	18	-	6	5,687	47,207	52,918
1976	24	-	232	5,072	10,890	16,218	22	-	-	5,016	1,548	6,586	46	-	232	10,088	12,438	22,804
1977	96	-	6	9,443	47,455	57,000	22	-	225	1,145	1,170	2,562	118	-	231	10,588	48,625	59,562
1978	444	-	244	39,694	44,595	84,977	38	-	407	1,995	1,229	3,669	482	-	651	41,689	45,824	88,646
1979	1,035	-	177	40,811	37,123	79,146	16	-	890	6,078	1,195	8,179	1,051	-	1,067	46,889	38,318	87,325
1980	502	-	-	1,435	14,755	16,692	131	-	229	4,232	1,393	5,985	633	-	229	5,667	16,148	22,677
1981	198	-	5	26,417	29,325	55,945	32	-	2,345	6,530	2,819	11,726	230	-	2,350	32,947	32,144	67,671
1982	253	-	318	9,849	40,030	50,450	1	-	1,835	3,785	3,537	9,158	254	-	2,153	13,634	43,567	59,608
1983	254	-	-	17,027	65,776	83,057	-	-	-	-	-	-[c]	-	-	-	-	-	-
1984	-	-	5,959	28,035	9,477	43,471	-	-	-	-	-	-[c]	-	-	-	-	-	-
1985	816	32	1,803	559	24,466	27,676	67	-	1,389	1,212	947	3,615	883	32	3,192	1,771	25,413	31,291
1986	600	41	5,874	15,795	20,668	42,978	-	-	-	-	-	-[c]	-	-	-	-	-	-
1987	907	15	64	568	17,278	18,832	-	-	-	-	-	-[c]	-	-	-	-	-	-
1988	663	93	3,974	13,703	18,585	37,018	-	-	-	-	-	-[c]	-	-	-	-	-	-
1989	62	0	0	0	167	229	-	-	-	-	-	-[c]	-	-	-	-	-	-
1990	202	0	0	501	3,723	4,426	-	-	-	-	-	-[c]	-	-	-	-	-	-
1991	161	0	0	0	804	965	312	-	2,153	3,555	2,660	8,680[d]	473	-	2,153	3,555	3,464	9,645
1992	0	0	3,531	0	6	3,537	100	-	1,281	6,152	1,260	8,793[d]	100	-	4,812	6,152	1,266	12,330
1993	3	0	4,065	0	167	4,235	368	-	1,217	1,726	1,635	4,946[d]	371	-	5,282	1,726	1,802	9,181
1994	0	0	5,345	0	414	5,759	322	104	1,180	9,345	3,476	14,427[d]	322	104	6,525	9,345	3,890	20,186
1995	4	44	3,742	2,962	1,171	7,923	284	17	1,353	2,046	3,774	7,474[d]	288	61	5,095	5,008	4,945	15,397
1996	0	0	1,915	68,609	0	70,524	417	52	1,720	9,442	2,319	13,951[d]	417	52	3,635	78,051	2,319	84,475
1997	844	0	1,409	0	2,683	4,936	619	50	1,213	1,314	2,064	5,261[d]	1,463	50	2,622	1,314	4,747	10,197
1998	105	0	1,462	145,669	2,311	149,547	414	49	1,831	6,891	1,376	10,561[d]	519	49	3,293	152,560	3,687	160,108
1999	0	0	0	0	0	0												
5-year avg.[a]	191	9	2,775	43,448	1,316	47,738	411	54	1,459	5,808	2,602	10,335	602	63	4,234	49,256	3,918	58,073
10-year avg.[b]	138	4	2,147	21,774	1,145	25,208	-	-	-	-	-	-	-	-	-	-	-	-

[a] 1994-1998

[b] 1989-1998

[c] Subsistence survey not conducted.

[d] Harvest estimated from Div. of Subsistence survey.

Appendix Table 5. Commercial and subsistence salmon catches by species, by year in Norton Bay Subdistrict, Norton Sound District, 1962-1999.

NORTON BAY (SUBDISTRICT 4)

	Commercial						Subsistence						Combined					
Year	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total
1962	387	7	40	4,402	24,380	29,216	-	-	-	-	-	-	387	7	40	4,402	24,380	29,216
1963	137	2	-	17,676	12,469	30,284	-	-	-	5,097	-	5,097	137	2	-	22,773	12,469	35,381
1964	50	3	-	988	5,916	6,957	-	-	-	-	-	-	50	3	-	988	5,916	6,957
1965	-	-	-	-	-	-	4	-	22	252	3,032	3,310	4	-	22	252	3,032	3,310
1966	-	-	-	-	-	-	7	-	41	929	3,612	4,589	7	-	41	929	3,612	4,589
1967	-	-	-	-	-	-	12	-	14	1,097	2,945	4,068	12	-	14	1,097	2,945	4,068
1968	-	-	-	-	-	-	28	-	71	1,916	1,872	3,887	28	-	71	1,916	1,872	3,887
1969	26	-	-	4,849	3,974	8,849	59	-	189	2,115	3,855	6,218	85	-	189	6,964	7,829	15,067
1970	-	-	-	-		-	3	-	10	840	3,500	4,353	3	-	10	840	3,500	4,353
1971	-	-	-	-	-	-	5	-	47	92	2,619	2,763	5	-	47	92	2,619	2,763
1972	43	-	-	1,713	7,799	9,555	30	-	44	2,089	2,022	4,185	73	-	44	3,802	9,821	13,740
1973	28	-	-	1,645	4,672	6,345	1	-	-	10	130	141	29	-	-	1,655	4,802	6,486
1974	21	-	-	654	3,826	4,501	-	-	-	17	900	917	21	-	-	671	4,726	5,418
1975	68	-	89	1,137	17,385	18,679	1	-	-	93	361	455	69	-	89	1,230	17,746	19,134
1976	102	-	95	4,456	7,161	11,814	2	-	-	41	236	279	104	-	95	4,497	7,397	12,093
1977	158	-	1	2,495	13,563	16,217	14	-	-	420	2,055	2,489	172	-	1	2,915	15,618	18,706
1978	470	-	144	8,471	21,973	31,058	12	-	21	1,210	1,060	2,303	482	-	165	9,681	23,033	33,361
1979	856	-	2,547	6,201	15,599	25,203	12	-	697	735	1,400	2,844	868	-	3,244	6,936	16,999	28,047
1980	340	-	-	47	7,855	8,242	22	-	33	4,275	1,132	5,462	362	-	33	4,322	8,987	13,704
1981	63	-	-	177	3,111	3,351	7	-	82	2,314	3,515	5,918	70	-	82	2,491	6,626	9,269
1982	96	-	2,332	2,535	7,128	12,091	1	-	484	2,600	2,485	5,570	97	-	2,816	5,135	9,613	17,661
1983	215	-	204	3,935	17,157	21,511	-	-	-	-	-	- [c]	-	-	-	-	-	-
1984	-	-	-	1,162	3,442	4,604	-	-	-	-	-	- [c]	-	-	-	-	-	-
1985	528	-	384	68	9,948	10,928	-	-	-	-	-	- [c]	-	-	-	-	-	-
1986	139	2	1,512	40	1,994	3,687	-	-	-	-	-	- [c]	-	-	-	-	-	-
1987	544	-	145	16	3,586	4,291	-	-	-	-	-	- [c]	-	-	-	-	-	-
1988	434	2	709	1,749	7,521	10,415	-	-	-	-	-	- [c]	-	-	-	-	-	-
1989	-	-	-	-	-	-	-	-	-	-	-	- [c]	-	-	-	-	-	-
1990 [d]	0	0	0	0	0	0	-	-	-	-	-	- [c]	-	-	-	-	-	-
1991 [d]	0	0	0	0	0	0	-	-	-	-	-	- [c]	-	-	-	-	-	-
1992	27	0	0	0	1,787	1,814	-	-	-	-	-	- [c]	-	-	-	-	-	-
1993	267	0	0	290	1,378	1,935	-	-	-	-	-	- [c]	-	-	-	-	-	-
1994	0	0	0	0	0	0	308	1	370	6,049	4,581	11,309 [e]	308	1	370	6,049	4,581	11,309
1995	0	0	0	0	0	0	475	46	985	3,514	5,828	10,848 [e]	475	46	985	3,514	5,828	10,848
1996	0	0	0	0	0	0	295	3	676	3,929	4,161	9,064 [e]	295	3	676	3,929	4,161	9,064
1997	194	0	0	0	531	725	656	54	322	1,795	4,040	6,777 [e]	850	54	322	1,795	4,571	7,502
1998	0	0	0	0	0	0	684	0	388	2,009	6,192	9,274 [e]	684	0	388	2,009	6,192	9,274
1999	0	0	0	0	0	0												
5-year avg. [a]	39	0	0	0	106	145	484	21	548	3,459	4,960	9,454	522	21	548	3,459	5,067	9,599
10-year avg. [b]	49	0	0	29	370	447	-	-	-	-	-	-	-	-	-	-	-	-

[a] 1994-1998

[b] 1989-1998

[c] Subsistence survey not conducted.

[d] No commercial harvest reported.

[e] Harvest estimated from Div. of Subsistence survey.

Appendix Table 6. Commercial and subsistence salmon catches by species, by year in Shaktoolik Subdistrict, Norton Sound District, 1961-1999.

SHAKTOOLIK (SUBDISTRICT 5)

	Commercial						Subsistence						Combined					
Year	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total
1961	140	-	-	29,075	24,746	53,961	-	-	-	-	-	-	140	-	-	29,075	24,746	53,961
1962	1,738	-	2,113	640	8,718	13,209	-	-	-	-	-	-	1,738	-	2,113	640	8,718	13,209
1963	480	11	563	5,138	19,153	25,345	-	-	-	-	-	-	480	11	563	5,138	19,153	25,345
1964	631	79	16	1,969	35,272	37,967	77	-	340	2,132	5,412	7,961	708	79	356	4,101	40,684	45,928
1965	127	30	-	3	8,356	8,516	31	-	107	3,763	3,420	7,321	158	30	107	3,766	11,776	15,837
1966	310	-	956	344	8,292	9,902	142	-	762	1,445	4,183	6,532	452	-	1,718	1,789	12,475	16,434
1967	43	-	88	1,050	1,655	2,836	262	-	387	2,010	4,436	7,095	305	-	475	3,060	6,091	9,931
1968	61	-	130	2,205	2,504	4,900	10	-	458	6,355	1,915	8,738	71	-	588	8,560	4,419	13,638
1969	33	-	276	6,197	8,645	15,151	40	-	193	4,018	3,439	7,690	73	-	469	10,215	12,084	22,841
1970	197	-	155	2,301	15,753	18,406	43	-	210	2,474	2,016	4,743	240	-	365	4,775	17,769	23,149
1971	284	-	238	28	13,399	13,949	87	-	329	494	5,060	5,970	371	-	567	522	18,459	19,919
1972	419	-	11	2,798	12,022	15,250	64	-	235	939	3,399	4,637	483	-	246	3,737	15,421	19,887
1973	289	-	177	6,450	14,500	21,416	51	-	130	3,410	1,397	4,988	340	-	307	9,860	15,897	26,404
1974	583	-	179	5,650	26,391	32,803	93	-	353	1,901	358	2,705	676	-	532	7,551	26,749	35,508
1975	651	2	812	1,774	49,536	52,775	18	-	14	1,394	334	1,760	669	2	826	3,168	49,870	54,535
1976	892	-	129	15,803	15,798	32,622	24	-	121	1,188	269	1,602	916	-	250	16,991	16,067	34,224
1977	1,521	4	418	7,743	36,591	46,277	49	-	170	585	2,190	2,994	1,570	4	588	8,328	38,781	49,271
1978	1,339	7	1,116	46,236	35,388	84,086	81	-	15	3,275	1,170	4,541	1,420	7	1,131	49,511	36,558	88,627
1979	2,377	-	3,383	18,944	22,030	46,734	62	-	1,605	2,575	1,670	5,912	2,439	-	4,988	21,519	23,700	52,646
1980	1,086	-	8,001	1,947	27,453	38,487	57	-	756	3,227	1,827	5,867	1,143	-	8,757	5,174	29,280	44,354
1981	1,484	4	1,191	29,695	21,097	53,471	8	-	525	2,225	3,490	6,248	1,492	4	1,716	31,920	24,587	59,719
1982	1,677	3	22,233	17,019	26,240	67,172	68	-	2,138	3,865	1,165	7,236	1,745	3	24,371	20,884	27,405	74,408
1983	2,742	4	12,877	12,031	67,310	94,964	-	-	-	-	-	-	- [c]	-	-	-	-	-
1984	1,613	-	10,730	1,596	32,309	46,248	-	-	-	-	-	-	- [c]	-	-	-	-	-
1985	5,312	-	2,808	-	13,403	21,523	298	-	1,379	24	298	1,999	5,610	-	4,187	24	13,701	23,522
1986	1,075	29	6,626	-	16,126	23,856	-	-	-	-	-	-	- [c]	-	-	-	-	-
1987	2,214	-	6,193	-	14,088	22,495	-	-	-	-	-	-	- [c]	-	-	-	-	-
1988	671	79	6,096	3,681	21,521	32,048	-	-	-	-	-	-	- [c]	-	-	-	-	-
1989	1,241	43	8,066	0	19,641	28,991	-	-	-	-	-	-	- [c]	-	-	-	-	-
1990	2,644	49	4,695	0	21,748	29,136	-	-	-	-	-	-	- [c]	-	-	-	-	-
1991	1,324	55	11,614	0	31,619	44,612	-	-	-	-	-	-	- [c]	-	-	-	-	-
1992	1,098	56	14,660	0	27,867	43,681	-	-	-	-	-	-	- [c]	-	-	-	-	-
1993	2,756	20	11,130	106,743	20,864	141,513	-	-	-	-	-	-	- [c]	-	-	-	-	-
1994	885	8	22,065	502,231	5,411	530,600	1,175	1	2,777	9,133	1,221	14,307 [d]	2,060	9	24,842	511,364	6,632	544,907
1995	1,239	5	10,856	37,377	14,775	64,252	1,275	2,480	2,626	7,024	2,480	15,885 [d]	2,514	2,485	13,482	44,401	17,255	80,137
1996	1,340	1	13,444	304,982	3,237	323,004	1,114	31	3,615	8,370	4,425	17,555 [d]	2,454	32	17,059	313,352	7,662	340,559
1997	2,449	0	4,694	-	5,747	12,890	1,146	62	2,761	5,779	1,612	11,360 [d]	3,595	62	7,455	5,779	7,359	24,250
1998	910	0	3,624	236,171	7,080	247,785	982	92	1,872	6,270	1,034	10,250 [d]	1,892	92	5,496	242,441	8,114	258,035
1999	581	0	2,398	0	2,181	5,160												
5-year avg. [a]	1,365	3	10,937	216,152	7,250	235,706	1,138	533	2,730	7,315	2,154	13,871	2,503	536	13,667	223,467	9,404	249,578
10-year avg. [b]	1,589	24	10,485	118,750	15,799	146,646	-	-	-	-	-	-	-	-	-	-	-	-

[a] 1994-1998

[b] 1989-1998

[c] Subsistence survey not conducted.

[d] Harvest estimated from Div. of Subsistece survey.

Appendix Table 7. Commercial and subsistence salmon catches by species, by year in Unalakleet Subdistrict, Norton Sound District, 1961-1999.

UNALAKLEET (SUBDISTRICT 6)

	Commercial						Subsistence						Combined					
Year	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total
1961	5,160	35	13,807	5,162	23,586	47,750	-	-	-	-	-	-	5,160	35	13,807	5,162	23,586	47,750
1962	5,089	-	6,739	6,769	30,283	48,880	-	-	-	-	-	-	5,089	-	6,739	6,769	30,283	48,880
1963	5,941	18	16,202	1,140	27,003	50,304	-	-	-	-	-	-	5,941	18	16,202	1,140	27,003	50,304
1964	1,273	1	79	1	19,611	20,965	488	-	2,227	7,030	6,726	16,471	1,761	1	2,306	7,031	26,337	37,436
1965	1,321	-	2,030	24	26,498	29,873	521	-	4,562	11,488	8,791	25,362 [c]	1,842	-	6,592	11,512	35,289	55,235
1966	1,208	-	4,183	5,023	16,840	27,254	90	-	789	6,083	3,387	10,349 [c]	1,298	-	4,972	11,106	20,227	37,603
1967	1,751	-	1,544	21,961	8,502	33,758	490	-	484	9,964	-	10,938 [c]	2,241	-	2,028	31,925	8,502	44,696
1968	960	-	6,549	41,474	14,865	63,848	186	-	1,493	11,044	2,982	15,705 [c]	1,146	-	8,042	52,518	17,847	79,553
1969	2,276	-	5,273	40,558	22,032	70,139	324	-	1,483	4,230	4,196	10,233 [c]	2,600	-	6,756	44,788	26,228	80,372
1970	1,604	-	4,261	30,779	40,029	76,673	495	-	3,907	10,104	7,214	21,720 [c]	2,099	-	8,168	40,883	47,243	98,393
1971	2,166	-	2,688	1,196	37,543	43,593	911	-	3,137	2,230	7,073	13,351 [c]	3,077	-	5,825	3,426	44,616	56,944
1972	2,235	-	412	28,231	20,440	51,318	643	-	1,818	3,132	4,132	9,725 [c]	2,878	-	2,230	31,363	24,572	61,043
1973	1,397	-	8,922	13,335	25,716	49,370	323	-	213	6,233	3,426	10,195	1,720	-	9,135	19,568	29,142	59,565
1974	2,100	-	1,778	93,332	36,170	133,380	313	-	706	7,341	588	8,948	2,413	-	2,484	100,673	36,758	142,328
1975	1,638	-	3,167	12,137	48,740	65,682	163	-	74	4,758	2,038	7,033	1,801	-	3,241	16,895	50,778	72,715
1976	1,211	1	5,141	37,203	24,268	67,824	142	-	694	4,316	2,832	7,984	1,353	1	5,835	41,519	27,100	75,808
1977	2,691	1	2,781	21,001	32,936	59,410	723	-	1,557	8,870	6,085	17,235	3,414	1	4,338	29,871	39,021	76,645
1978	7,525	5	5,737	136,200	37,079	186,546	1,044	-	2,538	13,268	3,442	20,292	8,569	5	8,275	149,468	40,521	206,838
1979	6,354	8	23,696	49,647	30,445	110,150	640	-	3,330	6,960	1,597	12,527	6,994	8	27,026	56,607	32,042	122,677
1980	4,339	3	21,512	203,142	64,198	293,194	1,046	-	4,758	19,071	5,230	30,105	5,385	3	26,270	222,213	69,428	323,299
1981	6,157	47	29,845	123,233	39,186	198,468	869	24	5,808	5,750	4,235	16,686	7,026	71	35,653	128,983	43,421	215,154
1982	3,768	2	61,343	142,856	44,520	252,489	913	2	7,037	20,045	4,694	32,691	4,681	4	68,380	162,901	49,214	285,180
1983	7,022	13	36,098	26,198	109,220	178,551	1,868	33	6,888	13,808	4,401	26,998	8,890	46	42,986	40,006	113,621	205,549
1984	6,804	6	47,904	-	43,317	98,031	1,650	1	6,675	17,418	3,348	29,092	8,454	7	54,579	17,418	46,665	127,123
1985	12,621	21	15,421	1	25,111	53,175	1,397	3	2,244	55	1,968	5,667	14,018	24	17,665	56	27,079	58,842
1986	4,494	153	20,580	-	30,239	55,466	-	-	-	-	-	- [d]	-	-	-	-	-	-
1987	3,246	141	15,097	97	17,525	36,106	-	-	-	-	-	- [d]	-	-	-	-	-	-
1988	2,218	157	24,232	23,730	25,363	75,700	-	-	-	-	-	- [d]	-	-	-	-	-	-
1989	4,402	222	36,025	-	20,825	61,474	-	-	4,681	17,500	1,388	- [e]	-	-	-	-	-	-
1990	5,998	358	52,015	-	23,659	82,030	2,476 [e]	-	-	-	-	-	-	-	-	-	-	-
1991	4,534	147	52,033	-	39,609	96,323	-	-	-	-	-	- [d]	-	-	-	-	-	-
1992	3,409	229	84,449	6,284	52,547	146,918	-	-	-	-	-	- [d]	-	-	-	-	-	-
1993	5,944	251	26,290	42,061	28,156	102,702	-	-	-	-	-	- [d]	-	-	-	-	-	-
1994	4,400	71	71,019	480,158	12,288	567,936	5,294	819	16,081	31,572	12,732	66,498 [f]	9,694	890	87,100	511,730	25,020	634,434
1995	7,617	78	31,280	37,009	24,843	100,827	5,049	807	13,110	17,246	13,460	49,672 [f]	12,666	885	44,390	54,255	38,303	150,499
1996	3,644	-	52,200	113,837	7,369	177,050	5,324	608	15,963	19,782	16,481	58,157 [f]	8,968	608	68,163	133,619	23,850	235,207
1997	9,067	159	26,079	-	17,139	52,444	6,325	353	9,120	10,804	7,649	34,251 [f]	15,392	512	35,199	10,804	24,788	86,695
1998	6,413	7	24,534	99,412	6,210	136,576	3,963	201	7,303	13,173	2,551	27,191 [f]	10,376	208	31,837	112,585	8,761	163,767
1999	1,927	0	10,264	0	5,700	17,891												
5-year avg. [a]	6,228	63	41,022	146,083	13,570	206,967	5,191	558	12,315	18,515	10,575	47,154	11,419	621	53,338	164,599	24,144	254,120
10-year avg. [b]	5,543	152	45,592	77,876	23,265	152,428	-	-	-	-	-	-	-	-	-	-	-	-

[a] 1994-1998

[b] 1989-1998

[c] Subsistence catches from 1966-72 includes fish taken at St. Michael.

[d] Subsistence surveys not conducted.

[e] In-depth survey by Subsistence Division.

[f] Harvest estimate from Div. of Subsistence survey. Includes harvest in Stebbins and St. Michael.

Appendix Table 8. Commercial and subsistence salmon catches by species, by year for all subdistricts in Norton Sound District, 1961-1999.

ALL SUBDISTRICTS

	Commercial						Subsistence						Combined					
Year	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total	Chinook	Sockeye	Coho	Pink	Chum	Total
1961	5,300	35	13,807	34,327	48,332	101,801	-	-	-	-	-	-	5,300	35	13,807	34,327	48,332	101,801
1962	7,286	18	9,156	33,187	182,784	232,431	-	-	-	-	-	-	7,286	18	9,156	33,187	182,784	232,431
1963	6,613	71	16,765	55,625	154,789	233,863	5	-	118	16,607	17,635	34,365	6,618	71	16,883	72,232	172,424	268,228
1964	2,018	126	98	13,567	148,862	164,671	565	-	2,567	9,225	12,486	24,843	2,583	126	2,665	22,792	161,348	189,514
1965	1,449	30	2,030	220	36,795	40,524	574	-	4,812	19,131	30,772	55,289	2,023	30	6,842	19,351	67,567	95,813
1966	1,553	14	5,755	12,778	80,245	100,345	269	-	2,210	14,335	21,873	38,687	1,822	14	7,965	27,113	102,118	139,032
1967	1,804	-	2,379	28,879	41,756	74,818	817	-	1,222	17,516	22,724	42,279	2,621	-	3,601	46,395	64,480	117,097
1968	1,045	-	6,885	71,179	45,300	124,409	237	-	2,391	36,912	11,661	51,201	1,282	-	9,276	108,091	56,961	175,610
1969	2,392	-	6,836	86,949	82,795	178,972	436	-	2,191	18,562	15,615	36,804	2,828	-	9,027	105,511	98,410	215,776
1970	1,853	-	4,423	64,908	107,034	178,218	561	-	4,675	26,127	22,763	54,126	2,414	-	9,098	91,035	129,797	232,344
1971	2,593	-	3,127	4,895	131,362	141,977	1,026	197	4,097	10,863	21,618	37,801	3,619	197	7,224	15,758	152,980	179,778
1972	2,938	-	454	45,182	100,920	149,494	804	93	2,319	14,158	13,873	31,247	3,742	-	2,773	59,340	114,793	180,741
1973	1,918	-	9,282	46,499	119,098	176,797	392	-	520	14,770	7,185	22,867	2,310	-	9,802	61,269	126,283	199,664
1974	2,951	-	2,092	148,519	162,267	315,829	420	-	1,064	16,426	3,958	21,868	3,371	-	3,156	164,945	166,225	337,697
1975	2,393	2	4,593	32,388	212,485	251,861	186	11	192	15,803	8,113	24,305	2,579	13	4,785	48,191	220,598	276,166
1976	2,243	11	6,934	87,919	95,956	193,063	203	-	1,004	18,048	7,718	26,973	2,446	11	7,938	105,967	103,674	220,036
1977	4,500	5	3,690	48,675	200,455	257,325	846	-	2,530	14,296	26,607	44,279	5,346	5	6,220	62,971	227,062	301,604
1978	9,819	12	7,335	325,503	189,279	531,948	1,211	-	2,981	35,281	12,257	51,730	11,030	12	10,316	360,784	201,536	583,678
1979	10,706	57	31,438	167,411	140,789	350,401	747	-	8,487	25,247	11,975	46,456	11,453	57	39,925	192,658	152,764	396,857
1980	6,311	40	29,842	227,352	180,792	444,337	1,397	-	8,625	63,778	19,622	93,422	7,708	40	38,467	291,130	200,414	537,759
1981	7,929	56	31,562	232,479	169,708	441,734	2,021	38	13,416	28,741	32,866	77,082 [c]	9,950	94	44,978	261,220	202,574	518,816
1982	5,892	10	91,690	230,281	183,335	511,208	1,011	8	14,612	54,249	18,580	88,460 [c]	6,903	18	106,302	284,530	201,915	599,668
1983	10,308	27	49,735	76,913	319,437	456,420	-	-	-	-	-	- [d]	-	-	-	-	-	-
1984	8,455	6	67,875	119,381	146,442	342,159	-	-	-	-	-	- [d]	-	-	-	-	-	-
1985	19,491	166	21,968	3,647	134,928	180,200	-	-	-	-	-	- [d]	-	-	-	-	-	-
1986	6,395	233	35,600	41,260	146,912	230,400	-	-	-	-	-	- [d]	-	-	-	-	-	-
1987	7,080	207	24,279	2,260	102,457	136,283	-	-	-	-	-	- [d]	-	-	-	-	-	-
1988	4,096	1,252	37,214	74,604	107,966	225,132	-	-	-	-	-	- [d]	-	-	-	-	-	-
1989	5,707	265	44,091	123	42,625	92,811	-	-	-	-	-	- [d]	-	-	-	-	-	-
1990	8,895	434	56,712	501	65,123	131,665	-	-	-	-	-	- [d]	-	-	-	-	-	-
1991	6,068	203	63,647	-	86,871	156,789	-	-	-	-	-	- [d]	-	-	-	-	-	-
1992	4,541	296	105,418	6,284	83,394	199,933	-	-	-	-	-	- [d]	-	-	-	-	-	-
1993	8,972	279	43,283	157,574	53,562	263,670	-	-	-	-	-	- [d]	-	-	-	-	-	-
1994 [e,f]	5,285	80	102,140	982,389	18,290	1,108,184	7,374	1,161	22,124	71,066	25,020	126,745	12,659	1,241	124,264	1,053,455	43,310	1,234,929
1995 [e,f]	8,860	128	47,862	81,644	42,898	181,392	7,766	1,222	23,015	38,594	43,014	113,611	16,626	1,350	70,877	120,238	85,912	295,003
1996 [e,f]	4,984	1	68,206	487,441	10,609	571,241	7,255	1,182	26,304	64,724	34,585	134,050	12,239	1,183	94,510	552,165	45,194	705,291
1997 [e,f,j]	12,573	161	32,284	20	34,103	79,141	8,998	1,892	16,476	27,200	26,803	81,370	21,571	2,053	48,760	27,220	60,906	160,511
1998 [e,f,j]	7,429	7	29,623	588,013	16,324	641,396	8,295	1,214	19,007	51,933	20,032	100,480	15,724	1,221	48,630	639,946	36,356	741,876
1999	2,508	0	12,662	0	7,881	23,051												
5-year avg. [a]	7,826	75	56,023	427,901	24,445	516,271	7,938	1,334	21,385	50,703	29,891	111,251	15,764	1,410	77,408	478,605	54,336	627,522
10-year avg. [b]	7,331	185	59,327	230,399	45,380	342,622	-	-	-	-	-	-	-	-	-	-	-	-

[a] 1994-1998

[b] 1989-1998

[c] These figures also include subsistence estimates data from Stebbins and St. Michael.

[d] Subsistence surveys not conducted.

[e] Subsistence harvest estimate from Div. of Subsistence survey.

[f] 1997 Subsistece totals include Savoonga and Gamble.